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BRINKS HOFER GILSON & LIONE			EXAMINER	
P.O. BOX 10395			MONIKANG, GEORGE C	
CHICAGO, IL 60610			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/684,152

Applicant(s)

DEVANTIER, ALLAN; WELTI,
TODD

Examiner

George C. Monikang

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 8/12/2004.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 9/24/2007 have been fully considered but they are not persuasive.

Applicant argues that the Rabinowitz et al reference fails to disclose calculating correction factors across a plurality of listening positions. The examiner maintains his grounds of rejection because the applicant's argument is not reflected in his claim. The applicant claims "determining at least one potential correction factor" (Rabinowitz et al, para 0031). The applicant asserts that the Rabinowitz et al focuses on the average of the seat positions and thus does not calculate a transfer function for a plurality of listening positions. Applicant notes that to calculate the average transfer function, transfer functions of a plurality of listening positions would be calculated (Rabinowitz et al, fig. 4: 47-52).

2. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

In regards to double patenting rejection, applicant does not submit an argument therefore the double patenting rejection stands.

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a

terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1, 12, 17, 27, 29 (Application No. 10/684,152, hereinafter referred to as '152) are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending (Application No. 10/684,222, hereinafter referred to as '222). Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The '152 claims 1, 12, 17, 27, 29 are broader recitations of the same invention claimed in '222 claim 1. Therefore, '222 claim 1 is encompassed by '152 claims 1, 12, 17, 27, 29. It is critical that patents issuing from these applications be commonly owned to avoid potential licensees from owing license fees to two different parties.

3. Claims 2, 5, 16, 18, 20, 28 (Application No. 10/684,152, hereinafter referred to as '152) are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 7 of copending (Application No. 10/684,222, hereinafter referred to as '222). Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The '152 claims 2, 5, 16, 18, 20, 28 are broader recitations of the same invention claimed in '222 claim 7. Therefore, '222 claim 7 is encompassed by '152 claims 2, 5, 16,

18, 20, 28. It is critical that patents issuing from these applications be commonly owned to avoid potential licensees from owing license fees to two different parties.

4. Claims 10 & 14 (Application No. 10/684,152, hereinafter referred to as '152) are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 6 of copending (Application No. 10/684,208, hereinafter referred to as '208). Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The '152 claims 10 & 14 are broader recitations of the same invention claimed in '208 claim 6. Therefore, '208 claim 6 is encompassed by '152 claims 10 & 14. It is critical that patents issuing from these applications be commonly owned to avoid potential licensees from owing license fees to two different parties.

5. Claims 11, 15, 26 (Application No. 10/684,152, hereinafter referred to as '152) are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 9 of copending (Application No. 10/684,208, hereinafter referred to as '208). Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The '152 claims 11, 15, 26 are broader recitations of the same invention claimed in '208 claim 9. Therefore, '208 claim 9 is encompassed by '152 claims 11, 15, 26. It is

critical that patents issuing from these applications be commonly owned to avoid potential licensees from owing license fees to two different parties.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 5-30 & 33-35 are rejected under 35 U.S.C. 102(e) as being anticipated by Rabinowitz et al, US Patent Pub. 2003/0179891 A1.

Re Claim 1, Rabinowitz et al discloses an audio system comprising at least one correction factor, the correction factor selected based on a method comprising: generating acoustic signals from at least one loudspeaker placed at potential loudspeaker locations (para 0003); recording transfer functions for the generated acoustic signals at a plurality of listening positions (fig. 4: 47-52); determining at least one potential correction factor (para 0031); modifying the transfer functions based on the potential correction factors in order to generate predicted transfer functions (para 0031); statistically analyzing across at least one frequency of the predicted transfer

functions for the plurality of listening positions (para 0031); and selecting a correction factor based on the statistical analysis (claim 1).

Re Claim 2, Rabinowitz et al discloses the audio system of claim 1, where the potential correction factor is a non-temporal correction factor (para 0031).

Re Claim 3, Rabinowitz et al discloses the audio system of claim 2, where the non-temporal correction factor is selected from the group consisting of gain, amplitude, and equalization (paras 0030-0031).

Re Claim 5, Rabinowitz et al discloses the audio system of claim 1, where the potential correction factor is a temporal correction factor (paras 0030-0031).

Re Claim 6, Rabinowitz et al discloses the audio system of claim 1, where the statistical analysis indicates efficiency of the predicted transfer functions for the plurality of listening positions (para 0031).

Re Claim 7, Rabinowitz et al discloses the audio system of claim 6, where efficiency is examined for predetermined frequencies (para 0031).

Re Claim 8, Rabinowitz et al discloses the audio system of claim 7, where selecting a correction factor based on the statistical analysis comprises selecting a value for the correction factor to increase efficiency of the audio system in the predetermined frequencies (para 0031).

Re Claim 9, Rabinowitz et al discloses the audio system of claim 8, where the potential correction factor comprises potential volume correction (paras 0029, 0030); and where selecting a value to increase efficiency comprises selecting a value that

decreases volume of at least one of the loudspeakers in the audio system (paras 0029, 0030).

Re Claim 10, Rabinowitz et al discloses the audio system of claim 1, where the statistical analysis indicates consistency of the predicted transfer functions across the plurality of listening positions (para 0031).

Re Claim 11, Rabinowitz et al discloses the audio system of claim 1, where the statistical analysis indicates flatness for the predicted transfer functions (para 0031).

Claim 12 has been analyzed and rejected according to claim 1.

Re Claim 13, Rabinowitz et al discloses the machine readable medium of claim 12, where the statistical analysis indicates efficiency of the predicted transfer functions for the plurality of listening positions (para 0031).

Re Claim 14, Rabinowitz et al discloses the machine readable medium of claim 12, where the statistical analysis indicates consistency of the predicted transfer functions across the plurality of listening positions (para 0031).

Claim 15 has been analyzed and rejected according to claim 11.

Re Claim 16, Rabinowitz et al discloses the signal-bearing medium of claim 12, further comprising logic for recommending a specific correction factor (fig. 4; para 0031).

Claim 17 has been analyzed and rejected according to claim 1.

Claim 18 has been analyzed and rejected according to claim 2.

Claim 19 has been analyzed and rejected according to claim 3.

Claim 20 has been analyzed and rejected according to claim 5.

Claim 21 has been analyzed and rejected according to claim 6.

Claim 22 has been analyzed and rejected according to claim 7.

Claim 23 has been analyzed and rejected according to claim 8.

Claim 24 has been analyzed and rejected according to claim 9.

Re Claim 25, rabinowitz et al discloses the audio system of claim 17, where the statistical analysis indicates consistency of the predicted transfer functions across the plurality of listening positions (para 0031).

Claim 26 has been analyzed and rejected according to claim 11.

Claim 27 has been analyzed and rejected according to claim 1.

Claim 28 has been analyzed and rejected according to claim 16.

Claim 29 has been analyzed and rejected according to claim 1.

Re Claim 30, Rabinowitz et al discloses the method of claim 29, where modifying the statistical analysis comprises applying potential equalization factors (para 0031).

Re Claim 33, Rabinowitz et al discloses the audio system of claim 1, where the audio system has a first loudspeaker and a second loudspeaker; and where the correction factor selected for first loudspeaker is different from the correction factor selected for the second loudspeaker (fig. 4: 47-54: the correction factor is different for every position).

Re Claim 34, Rabinowitz et al discloses the audio system of claim 33, where the first loudspeaker and second loudspeaker, prior to the correction factors, receive the same signal (fig. 4: 46).

Re Claim 35, Rabinowitz et al discloses the audio system of claim 33, where the first loudspeaker and second loudspeaker comprise subwoofers (para 0021).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 & 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rabinowitz et al, US Patent Pub. 2003/0179891 A1.

Re Claim 4, which further recites, "where the equalization is selected from the group consisting of parametric, graphic, paragraphic, shelving, FIR (finite impulse response), and transversal equalization." Rabinowitz et al does not explicitly disclose the group consisting of parametric, graphic, paragraphic, shelving, FIR (finite impulse response), and transversal equalization as claimed. Official notice is taken that both the concept and advantages of providing the group consisting of parametric, graphic, paragraphic, shelving, FIR (finite impulse response), and transversal equalization is well known in the art. It would have been obvious to use the group consisting of parametric,

graphic, paragraphic, shelving, FIR (finite impulse response), and transversal equalization since they are methods used for equalization.

Re Claim 31, Rabinowitz et al discloses the method of claim 30, where recording transfer functions comprises recording transfer functions at a plurality of listening positions (fig. 4: 47-52). Claim 31 further recites "where the statistical analysis determines a frequency with a maximum spatial variance for the predicted transfer functions, and wherein the potential equalization factors are applied at the frequency with the maximum spatial variance for a predicted transfer function." Rabinowitz et al does not explicitly disclose the statistical analysis determining a frequency with a maximum spatial variance as claimed. Official notice is taken that both the concepts and advantages of the statistical analysis determining a frequency with a maximum spatial variance is well known in the art. It would have been obvious to use the statistical analysis determining a frequency with a maximum spatial variance since it's a variation of standard deviation commonly used for statical analysis.

Re Claim 32, Rabinowitz et al discloses the method of claim 31, where the potential equalization factors comprise a bandwidth setting (para 0027), a level setting (para 0030). Claim 32 further recites "a center frequency at the frequency with the maximum variance." Rabinwotiz et al does not explicitly disclose a center frequency at the frequency with the maximum variance as claimed. Official notice is taken that both the concepts and advantages of a center frequency at the frequency with the maximum variance is well known in the art. It would have been obvious to modify the center

frequency at the frequency with the maximum variance since it's a variation of standard deviation commonly used for statical analysis.

Contact


Any inquiry concerning this communication or earlier communications from the examiner should be directed to George C. Monikang whose telephone number is 571-270-1190. The examiner can normally be reached on M-F. alt Fri. Off 7:30am-5:00pm (est).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

George Monikang

12/10/2007


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